

Application No. 09/890,672

Amdt. Date January 20, 2003

Reply to Final Office Action of October 17, 2003

REMARKS/ARGUMENTS

Status Of The Claims

The Office Action dated October 17, 2003, has been carefully considered. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present claims in condition for allowance. Reconsideration and allowance of all claims is respectfully requested.

In the present amendment, Claims 1, 5, 7, 9, 11, 13-16, and 17 have been amended. Claims 1, 5, 9, 11, and 13-17 were modified for clarity and/or to remove language of the markush group. New Claims 18 and 19 have been added.

Formal Matters

In the Office Action, the Examiner has withdrawn the objection to the specification for not claiming priority to Provisional Application No. 60/119,044, and for not containing an abstract. The Examiner has withdrawn the objection to Claims 1-10 for the misspelling of the term "isobutyl."

The Examiner has withdrawn the rejection of Claims 1-10 under 35 U.S.C. §112, second paragraph. There are no outstanding rejections under 35 U.S.C. §112.

The Examiner has also withdrawn the rejections of Claims 1-6 and 9-10 under 35 U.S.C. §103(a) as being unpatentable over Vinson, et al., U.S. Patent Nos. 6,069,122 and 5,990,065.

Objections of the Specification

The specification was objected to for the use of the trademark terms without proper identification (i.e. "Dowanol" and Arcolsolv"). Applicants have amended the specification to include trademarks as appropriate. Accordingly, this objection is obviated.

Rejections Under 35 U.S.C. § 103(a)

Rejection of Claims 1-10 and 11-17 under 35 U.S.C. §103(a)

Claims 1-10 stand rejected under 35 U.S.C. §103(a) over Kasturi et al., U.S. Patent No. 6,208,631 (hereinafter "Kasturi") for reasons stated on pages 5-7 of the previous Office Action (Paper No. 6, Paragraph No. 13). In that Office Action, the Examiner asserts that Kasturi discloses a composition for the hand washing of dishes (see col. 1, lines 14-18) comprising a homopolymer of (N,N-dialkylanmino) alkyl acrylate (see col. 2, lines 6-49 and col. 4, lines 1-34), an anionic surfactant (see col. 8, line 53- col. 9, line 53), amphoteric surfactants (see col. 9, line 54-col. 12, line 67), 0.1-15% by weight of one or more diamines having both a pK1 and pK2 in the range of 8-11.5 (see col.

Application No. 09/890,672
Amdt. Date January 20, 2003
Reply to Final Office Action of October 17, 2003

13, lines 1-56), and a carrier component, such as propanediol and ethylene glycol (see col. 23, lines 7-19), per the requirements of the instant claims 1-10.

However, as will be set forth in detail below, Applicants submit that Claims 1-10 and 11-17 are non-obvious over and patentably distinguishable from Kasturi. The Applicants have surprisingly been found that a single variable addition of a diol or polymeric glycol to a light duty liquid (LDL) dishwashing detergent composition matrix provides unexpected and significant improvement in protease enzyme stability. The enzyme stability benefit is significant at both ambient and stressed (high) temperatures (see Howard D. Hutton Declaration, dated January 20, 2004). Without being limited by theory, it is believed that the data shows that a diol, propylene glycol, and mixtures thereof provide enzyme-stabilizing benefits by limiting the activity of enzymes in the LDL dishwashing composition during storage. Enzymes require water for optimal performance, thus deactivation is accomplished by reducing the amount of free water interacting with the enzyme by displacing a portion of the water with propylene glycol which is completely miscible with water. Upon use, the LDL dishwashing composition is significantly diluted with water, providing the enzyme with a water environment conducive to optimal activity and performance. The Applicants find no teaching or suggestion of improving the enzyme stability of the dishwashing detergent composition with the addition of a diol or polymeric glycol to the composition in Kasturi.

In light of the data showing unexpected results, as presented in the aforementioned Declaration, the Applicants submit that this rejection over Kasturi is obviated and reconsideration is respectfully requested.

Rejection of Claims 1-6, 9-10, and 11-17 under 35 U.S.C. §103(a)

Claims 1-6, 9-10, and 11-17 stand rejected under 35 U.S.C. §103(a) over Ofosu-Asante et al., U.S. Patent No. WO 98/28393 (hereinafter "Ofosu-Asante") for reasons stated on pages 5-7 of the previous Office Action (Paper No. 6, Paragraph No. 16). In that Office Action, the Examiner asserts that Ofosu-Asante discloses a dishwashing detergent composition comprising a diamine having both a pK1 and pK2 in the range of 8-11.5 (see page 7, lines 23-31), anionic surfactants (see page 9, lines 17-24), amphoteric surfactants (see page 16, lines 18-30), 0.1-7% by weight of a polymeric material, such as a polypropylene glycol having a molecular weight between 500 to 100,000 (see page 28, line 27-page 29, line 34), and a carrier, such as propanediol and ethylene glycol (see page 35, line 34-page 36, line 3), per the requirements of the instant claims 1-6 and 9-10.

Applicants submit that Claims 1-6, 9-10, and 11-17 are non-obvious over and patentably distinguishable from Ofosu-Asante. As explained above, the Applicants have surprisingly been found that a single variable addition of a diol or polymeric glycol (i.e. propylene glycol) to a light duty liquid (LDL) dishwashing detergent composition matrix provides unexpected and significant improvement in protease enzyme stability. The Applicants find no teaching or suggestion of

Application No. 09/890,672
Amdt. Date January 20, 2003
Reply to Final Office Action of October 17, 2003

improving the enzyme stability of the dishwashing detergent composition with the addition of a diol or polymeric glycol to the composition in Ofosu-Asante.

In light of the data showing unexpected results, as presented in the aforementioned enclosed declaration, the Applicants submit that this rejection over Ofosu-Asante is also obviated and reconsideration is respectfully requested.

CONCLUSION

It is believed that the enclosed declaration, the above amendments, and remarks represent a complete response to the Examiner's objections to the specification and claim rejections under 35 U.S.C. § 103 placing the present application in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted,

Elizabeth Ann Alum, et al

By 

Kevin L. Waugh
Attorney for Applicant(s)
Registration No. 47,206
(513) 627-7386

January 20, 2004
Cincinnati, Ohio
Customer No.: 27752
7408 RCE Amendment.doc